Fig.1

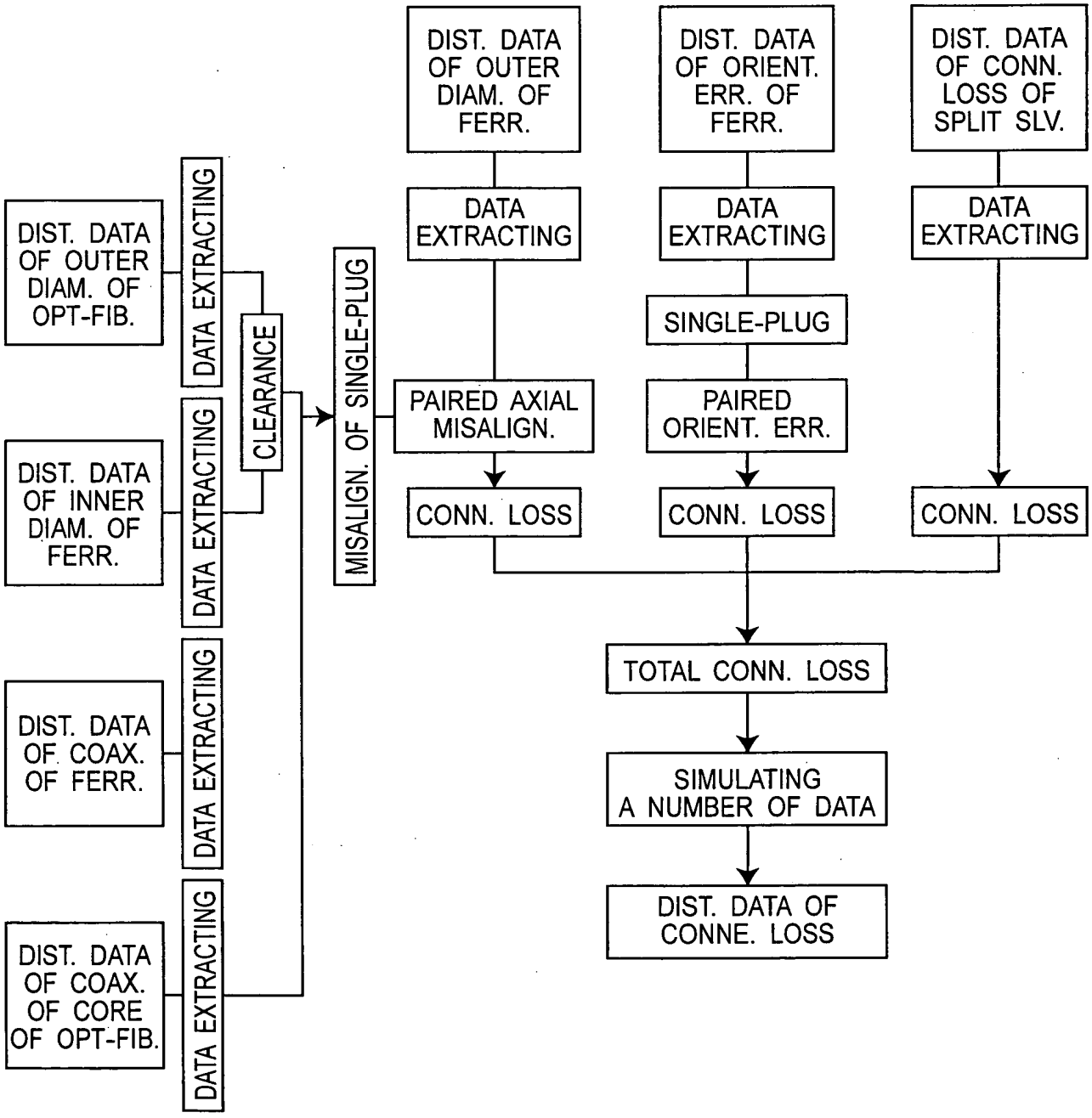

DIST. DATA OF OUTER DIAM. OF OPT-FIB.
DIST. DATA OF INNER DIAM. OF FERR.
DIST. DATA OF COAX. OF FERR.
DIST. DATA OF COAX. OF CORE OF OPT-FIB.
DATA EXTRACTING
DATA EXTRACTING
DATA EXTRACTING
DATA EXTRACTING
CLEARANCE
MISALIGN. OF SINGLE-PLUG
DIST. DATA OF OUTER DIAM. OF FERR.
DIST. DATA OF ORIENT. ERR. OF FERR.
DIST. DATA OF CONN. LOSS OF SPLIT SLV.
DATA EXTRACTING
DATA EXTRACTING
DATA EXTRACTING
SINGLE-PLUG
PAIRED AXIAL MISALIGN.
PAIRED ORIENT. ERR.
CONN. LOSS
CONN. LOSS
CONN. LOSS
TOTAL CONN. LOSS
SIMULATING A NUMBER OF DATA
DIST. DATA OF CONNE. LOSS

Fig.2A

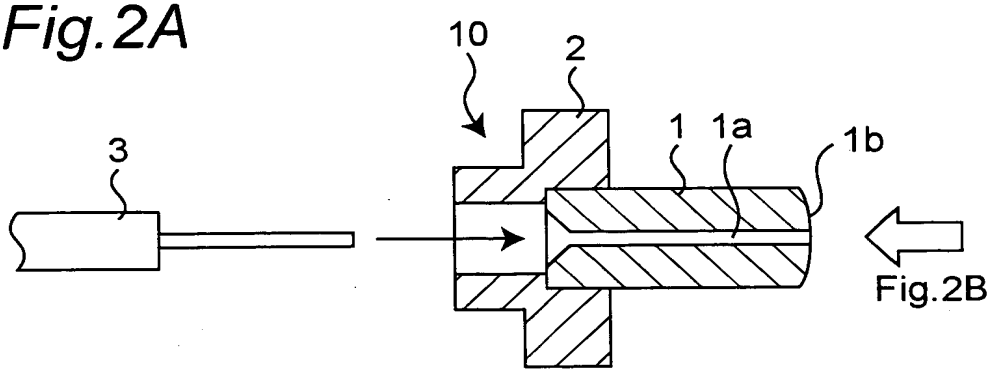


Fig.2B

Fig.2B

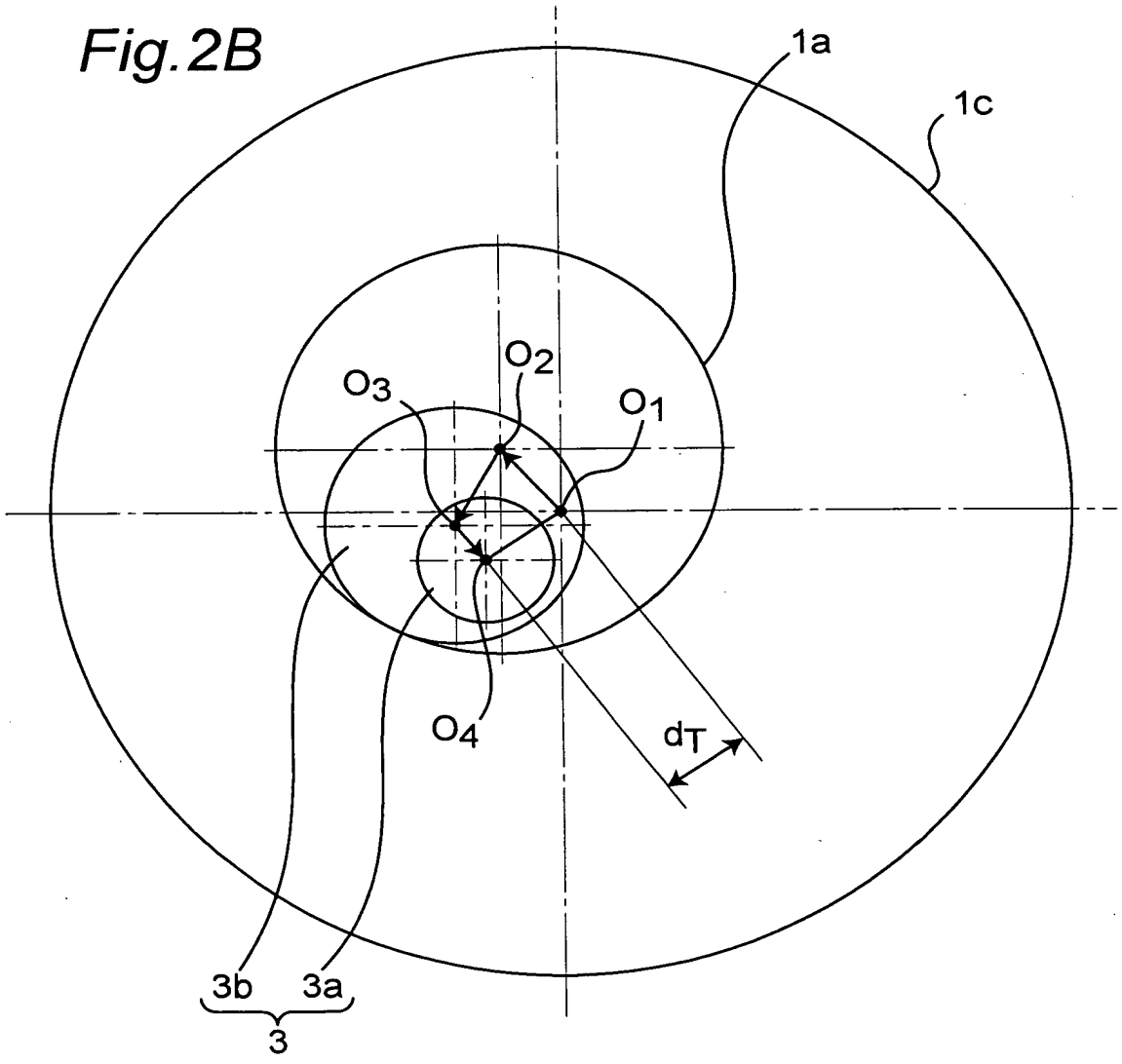


Fig.3A

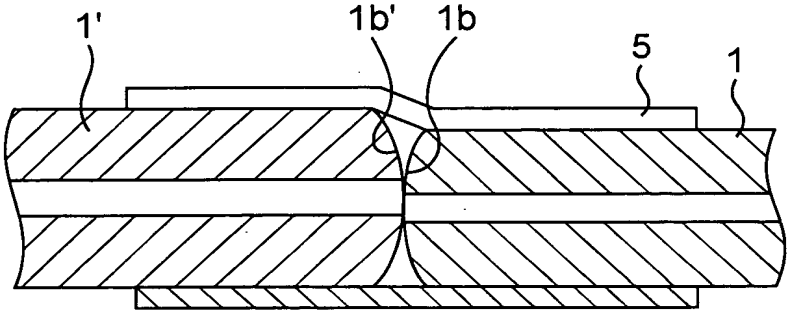


Fig.3B

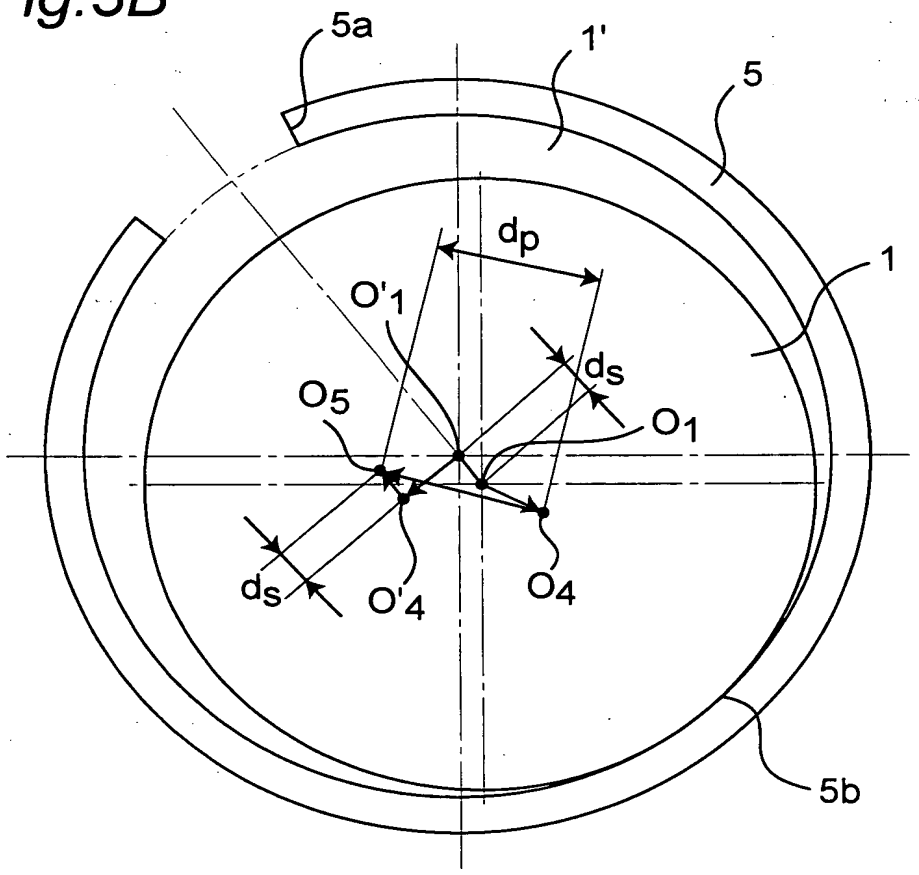


Fig.4A

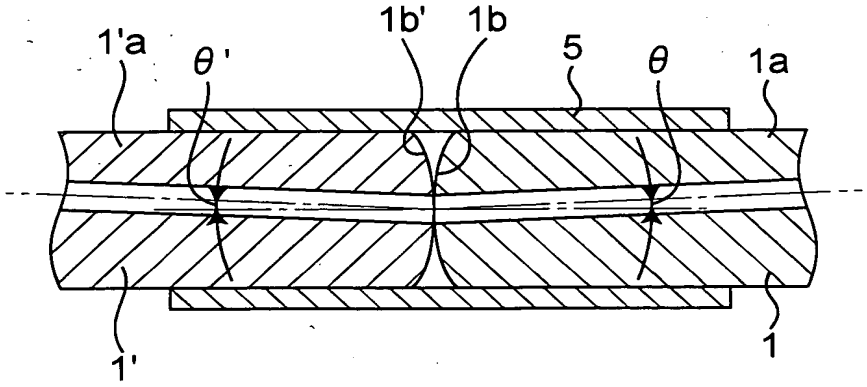


Fig.4B

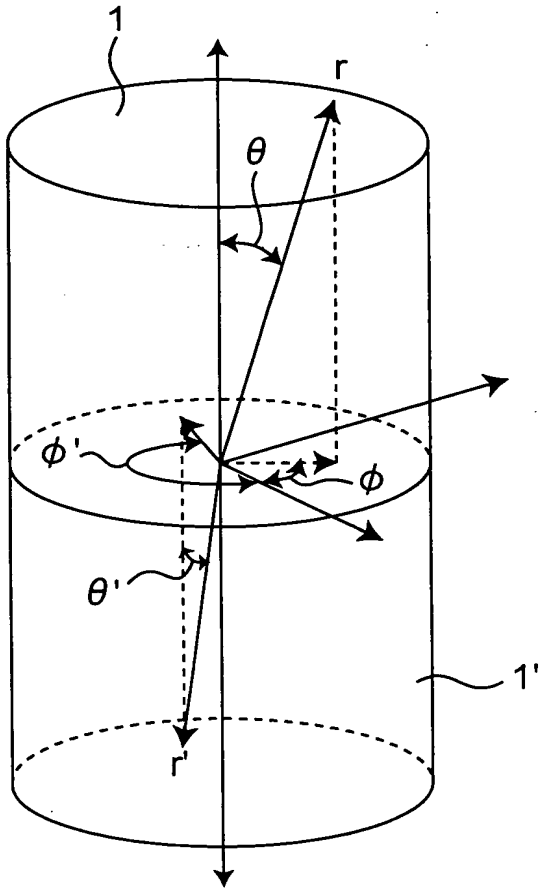


Fig.5

DATA No.	DATA
1	X1
2	X2
3	X3
4	X4
.	.
.	.
.	.
i	Xi
.	.
.	.
n	Xn

EXTRACTING ONE DATUM BY GENERATING RANDOM NUMBER

Fig.6

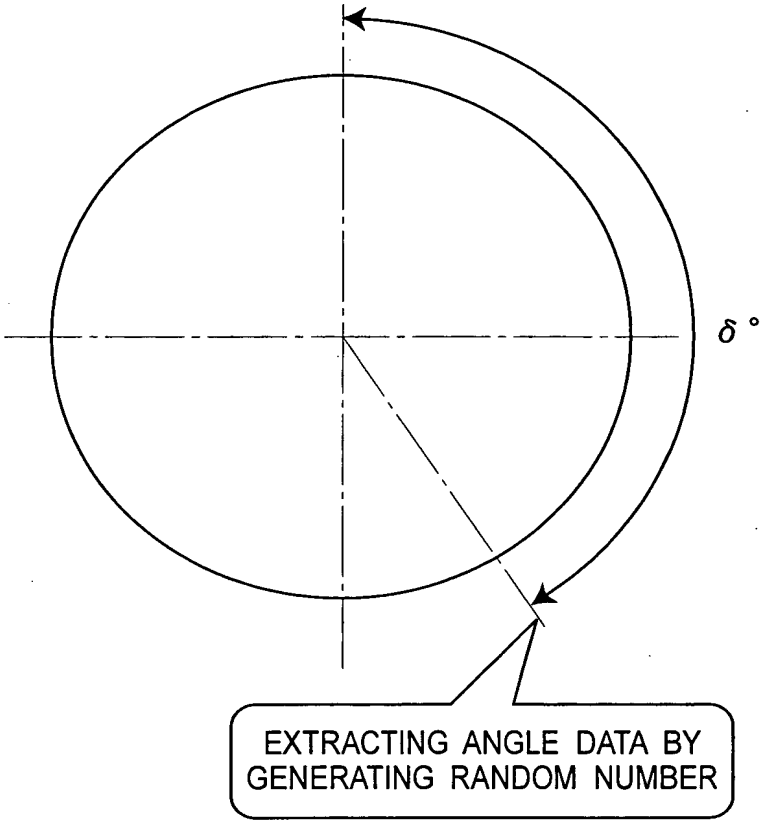


Fig.7

SAMPLE No.	1	2	3	·	·	i	·	·	n−1	n
1	—	—	—	—	—	—	—	—	—	—
2	X12	—	—	—	—	—	—	—	—	—
3	X13	X23	—	—	—	—	—	—	—	—
·	·	·	·	—	—	—	—	—	—	—
·	·	·	·	·	—	—	—	—	—	—
i	X1i	X2i	X3i	·	·	—	—	—	—	—
·	·	·	·	·	·	·	—	—	—	—
·	·	·	·	·	·	·	·	—	—	—
n−1	·	·	·	·	·	Xin−1	·	·	—	—
n	X1n	X2n	X3n	·	·	Xin	·	·	Xn−1n	—

AVE.	Xavr
DEV.	σ
MAX.	Xmax

Fig.8

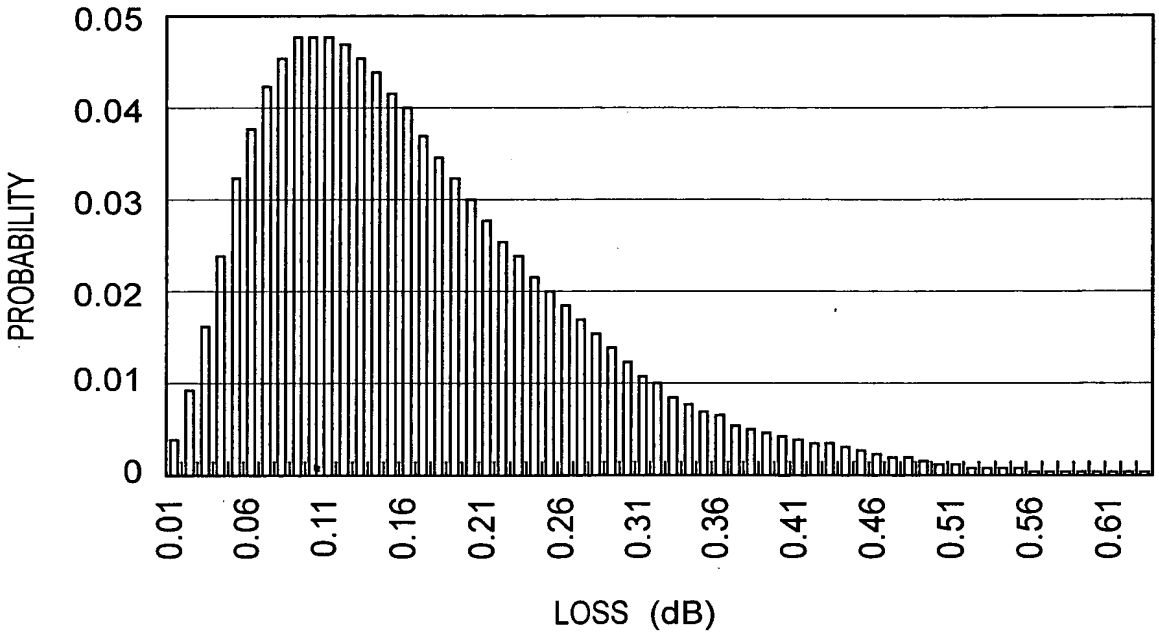

0.05
0.04
0.03
0.02
0.01
0
PROBABILITY
0.01
0.06
0.11
0.16
0.21
0.26
0.31
0.36
0.41
0.46
0.51
0.56
0.61
LOSS (dB)

Fig.9

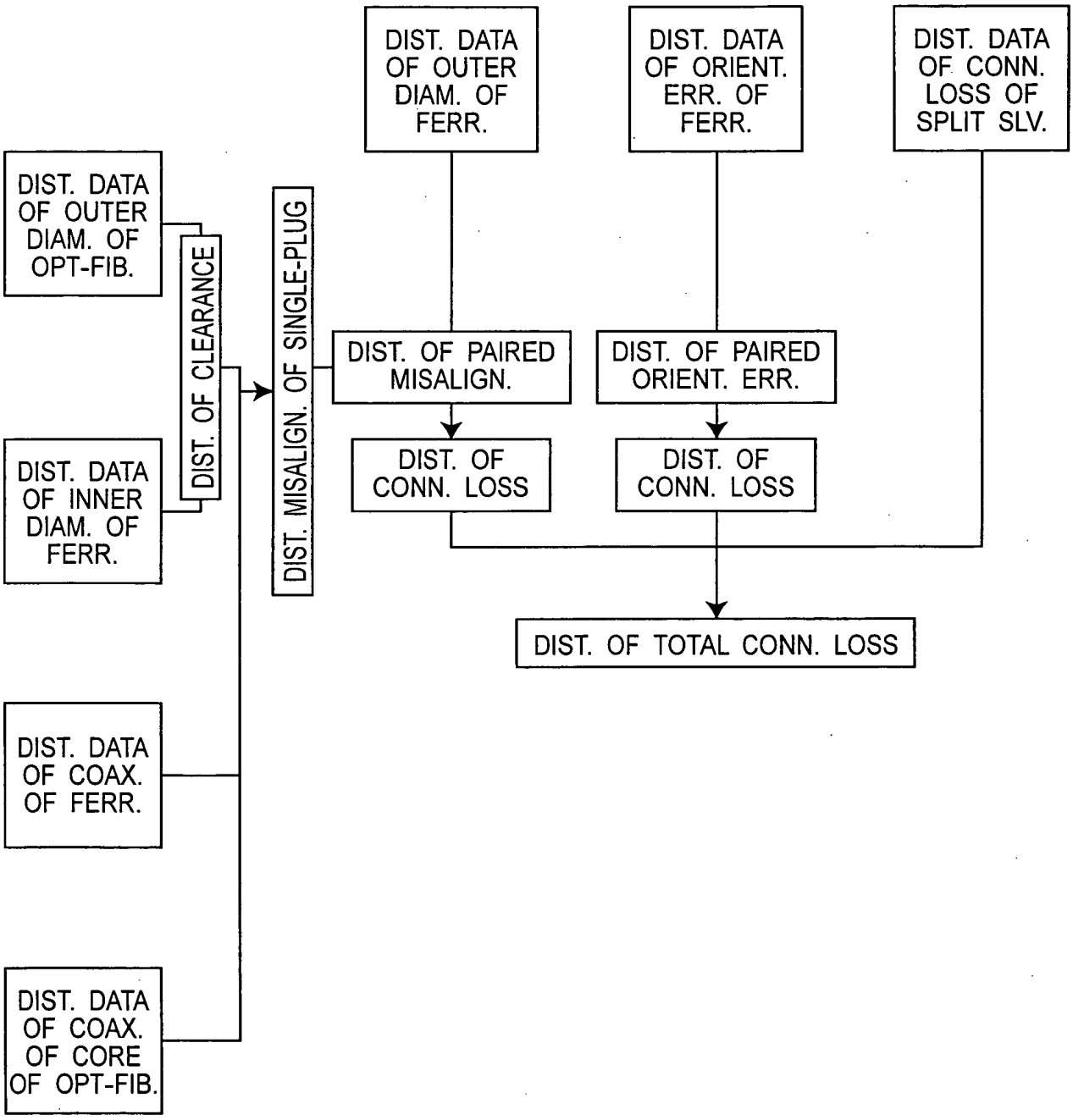

DIST. DATA OF OUTER DIAM. OF FERR.
DIST. DATA OF ORIENT. ERR. OF FERR.
DIST. DATA OF CONN. LOSS OF SPLIT SLV.
DIST. DATA OF OUTER DIAM. OF OPT-FIB.
DIST. OF CLEARANCE
DIST. MISALIGN. OF SINGLE-PLUG
DIST. OF PAIRED MISALIGN.
DIST. OF PAIRED ORIENT. ERR.
DIST. DATA OF INNER DIAM. OF FERR.
DIST. OF CONN. LOSS
DIST. OF CONN. LOSS
DIST. OF TOTAL CONN. LOSS
DIST. DATA OF COAX. OF FERR.
DIST. DATA OF COAX. OF CORE OF OPT-FIB.

Fig.10

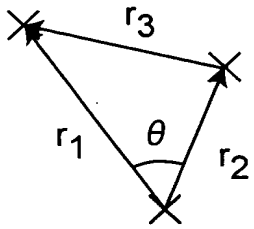


Fig.11

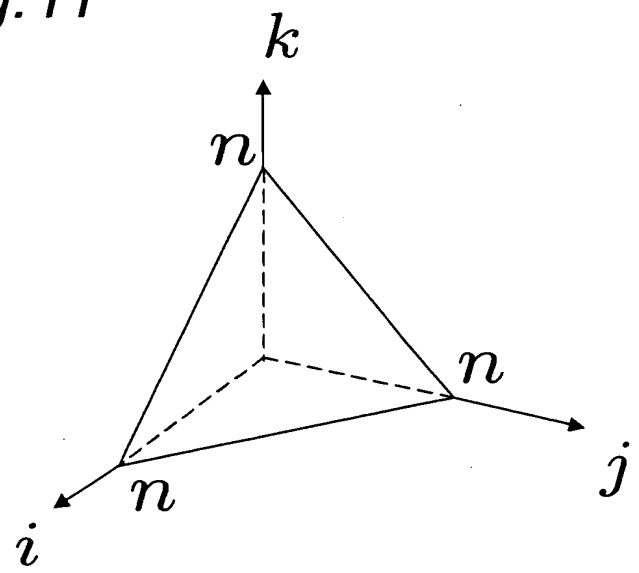


Fig.12

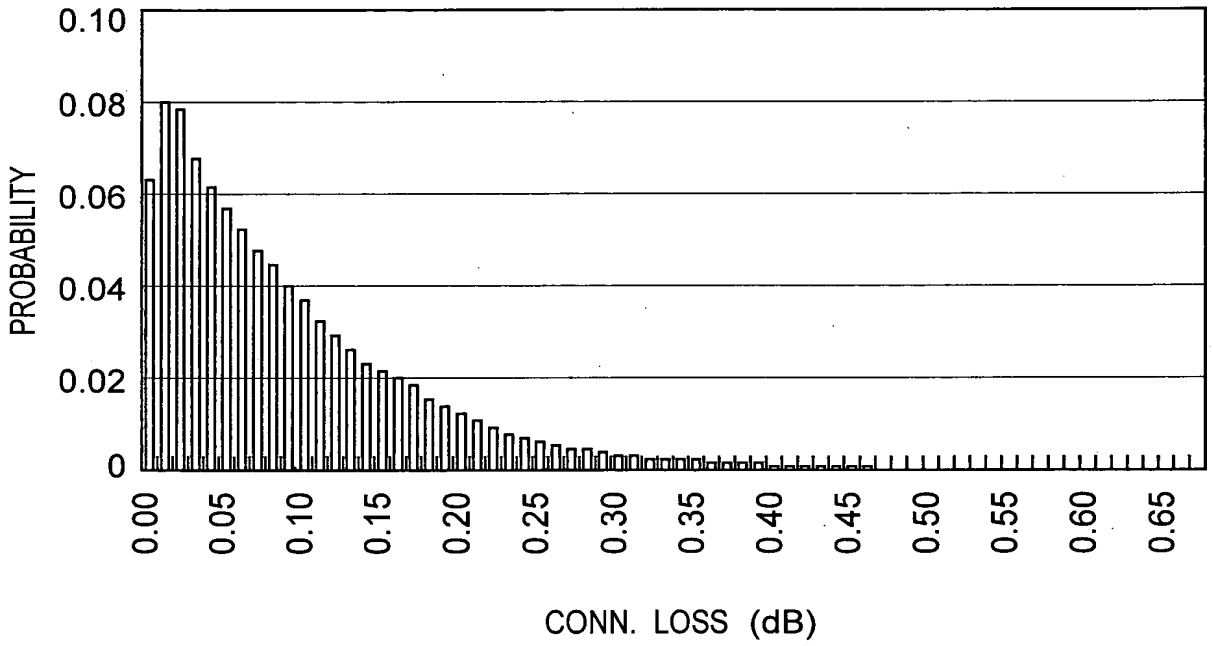

0.10
0.08
0.06
0.04
0.02
0
PROBABILITY
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
0.55
0.60
0.65
CONN. LOSS (dB)

Fig.13

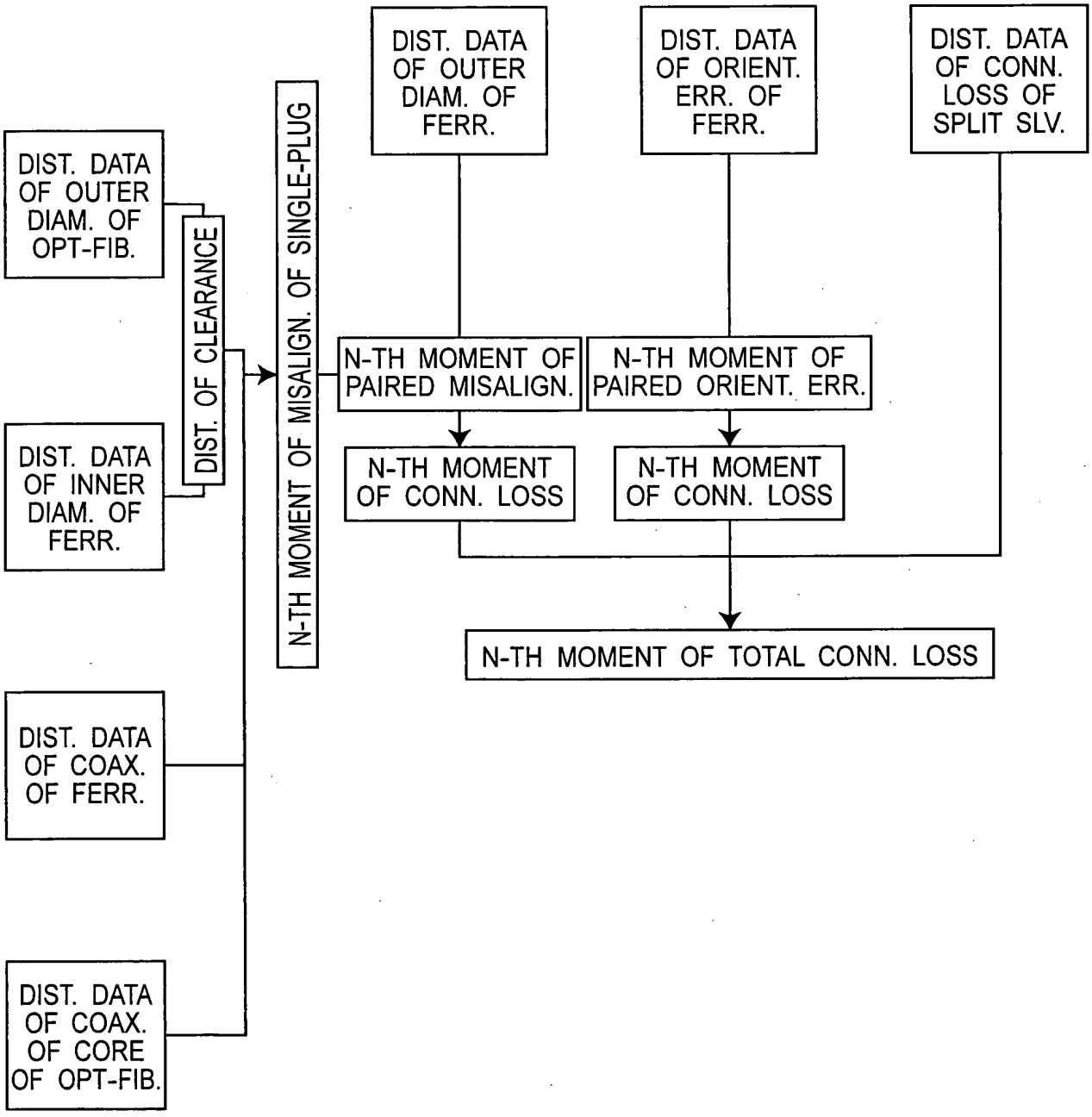

DIST. DATA OF OUTER DIAM. OF OPT-FIB.
DIST. OF CLEARANCE
DIST. DATA OF INNER DIAM. OF FERR.
DIST. DATA OF COAX. OF FERR.
DIST. DATA OF COAX. OF CORE OF OPT-FIB.
N-TH MOMENT OF MISALIGN. OF SINGLE-PLUG
DIST. DATA OF OUTER DIAM. OF FERR.
DIST. DATA OF ORIENT. ERR. OF FERR.
DIST. DATA OF CONN. LOSS OF SPLIT SLV.
N-TH MOMENT OF PAIRED MISALIGN.
N-TH MOMENT OF PAIRED ORIENT. ERR.
N-TH MOMENT OF CONN. LOSS
N-TH MOMENT OF CONN. LOSS
N-TH MOMENT OF TOTAL CONN. LOSS

Fig. 14

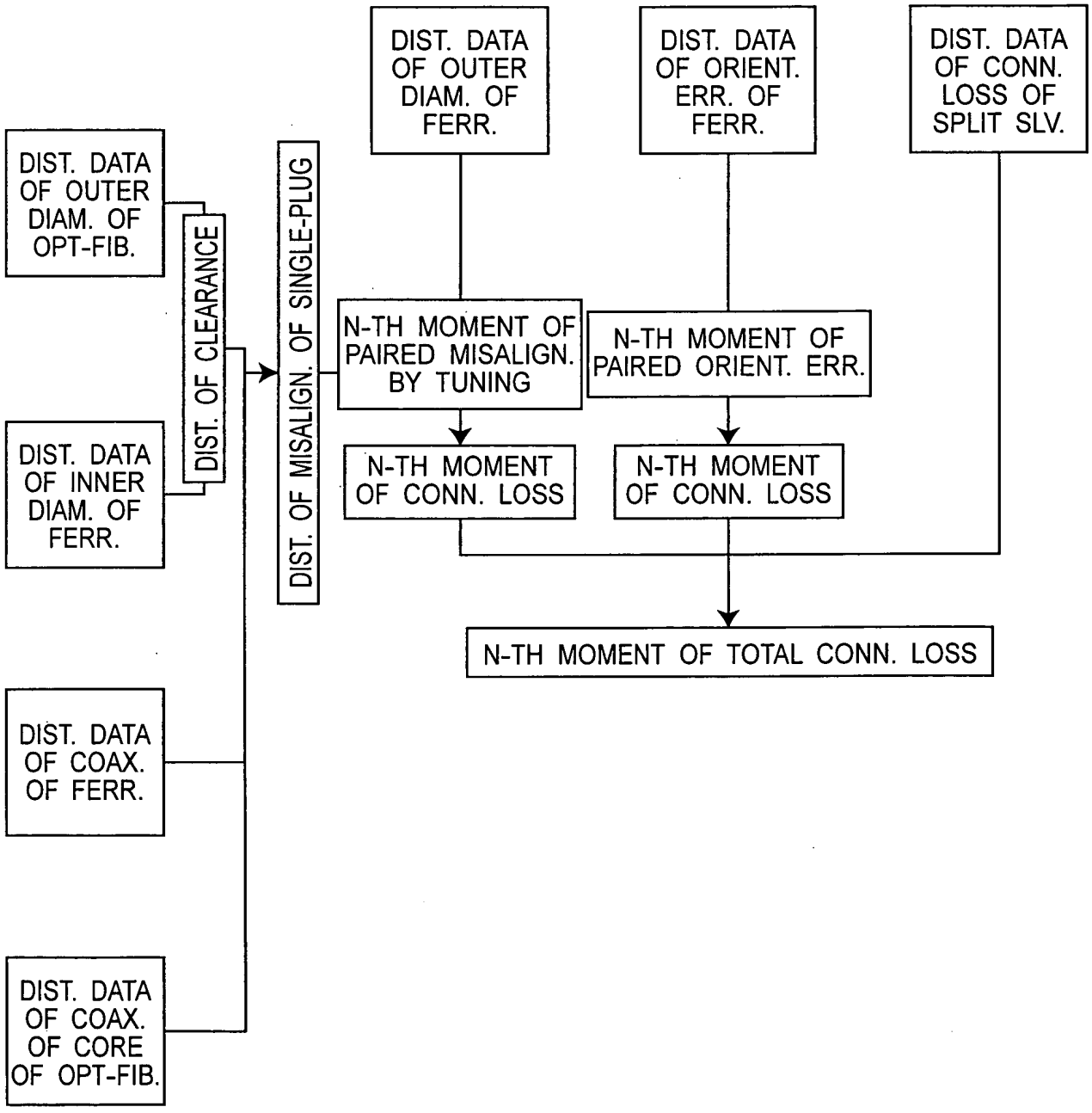

DIST. DATA OF OUTER DIAM. OF FERR.
DIST. DATA OF ORIENT. ERR. OF FERR.
DIST. DATA OF CONN. LOSS OF SPLIT SLV.
DIST. DATA OF OUTER DIAM. OF OPT-FIB.
DIST. OF CLEARANCE
DIST. OF MISALIGN. OF SINGLE-PLUG
N-TH MOMENT OF PAIRED MISALIGN. BY TUNING
N-TH MOMENT OF PAIRED ORIENT. ERR.
DIST. DATA OF INNER DIAM. OF FERR.
N-TH MOMENT OF CONN. LOSS
N-TH MOMENT OF CONN. LOSS
DIST. DATA OF COAX. OF FERR.
N-TH MOMENT OF TOTAL CONN. LOSS
DIST. DATA OF COAX. OF CORE OF OPT-FIB.

Fig.15A

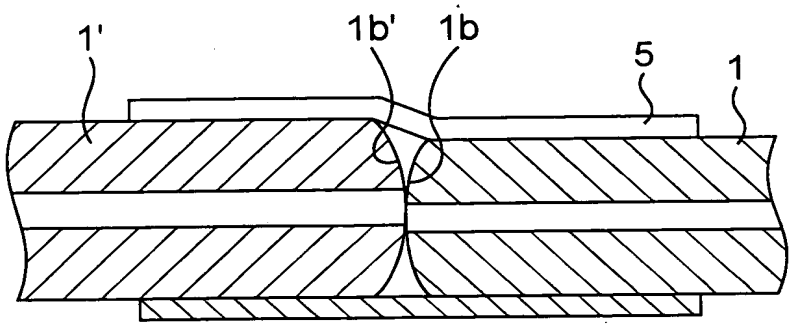


Fig.15B

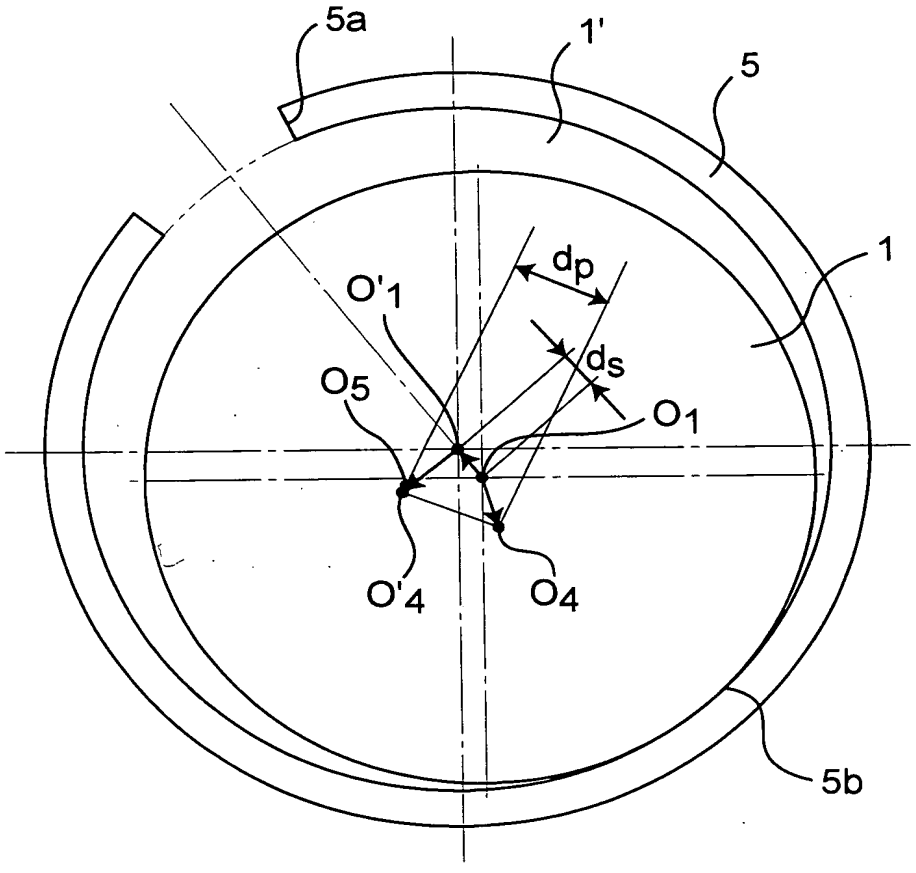


Fig. 16

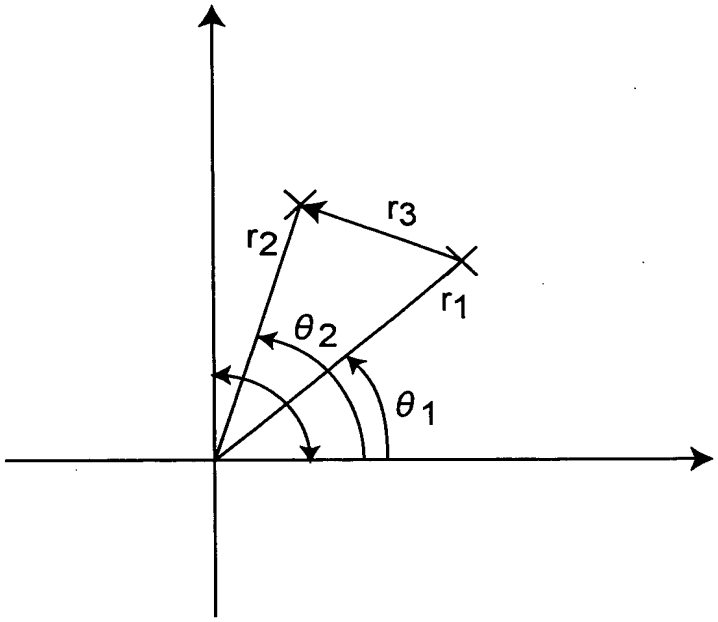


Fig.17A

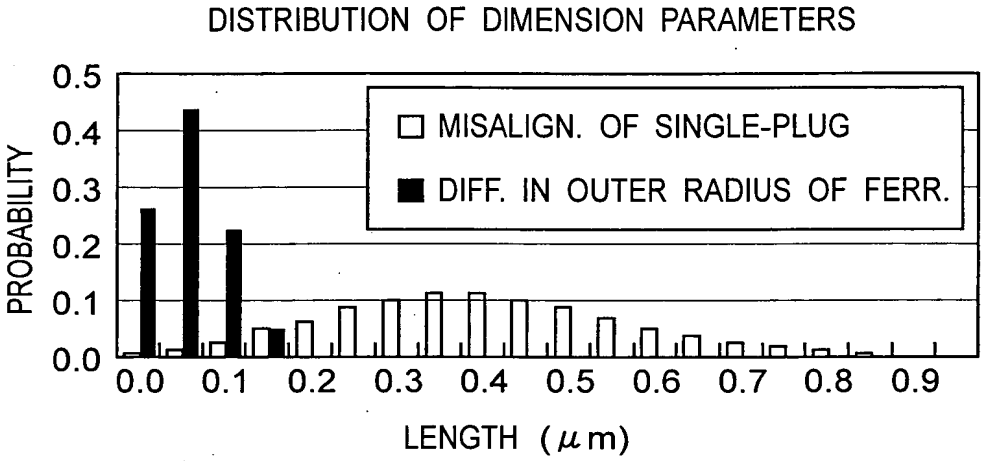


Fig.17B

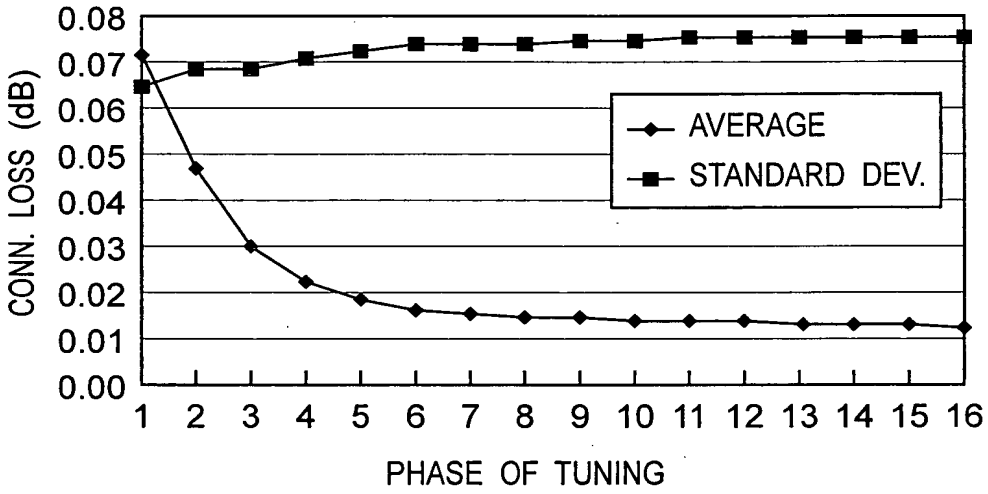


Fig.18

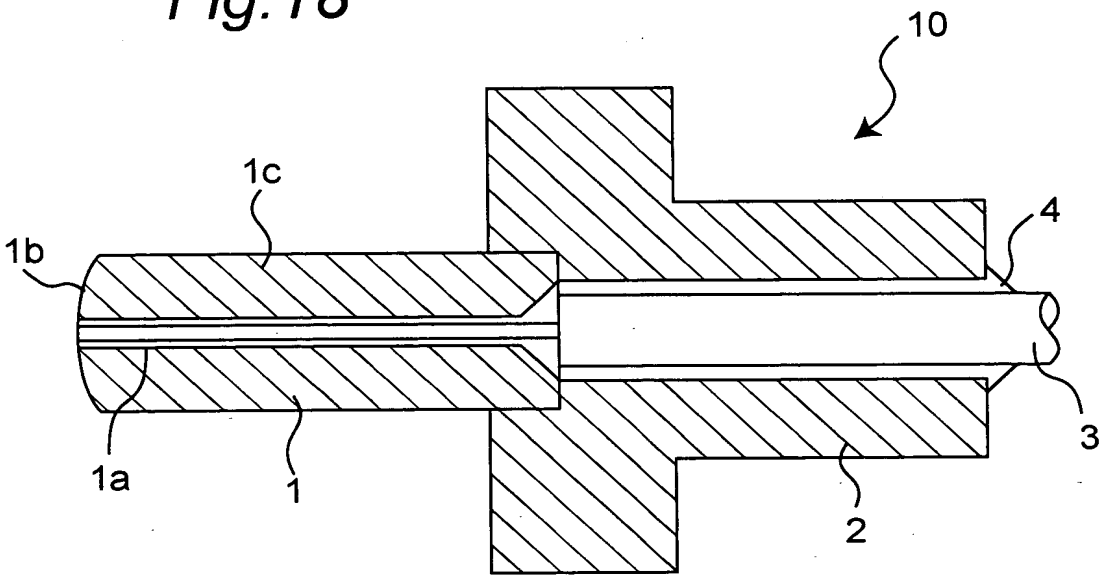


Fig.19

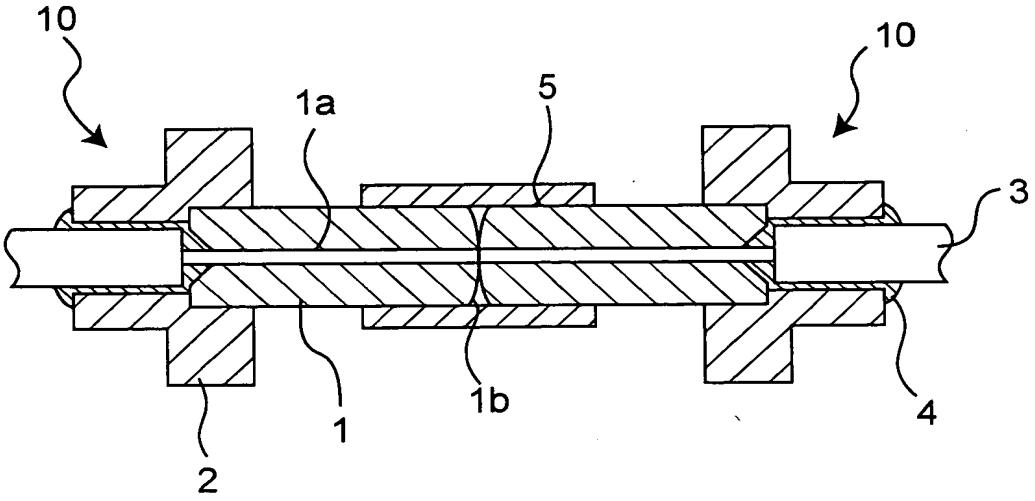


Fig.20A

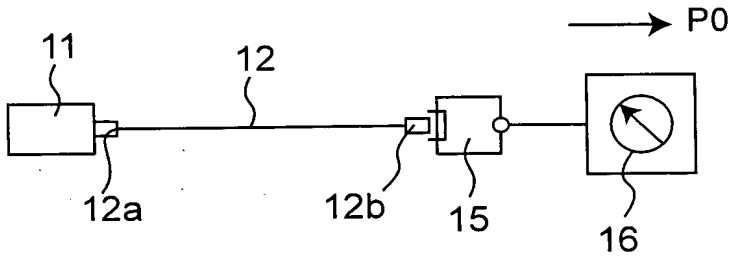


Fig.20B

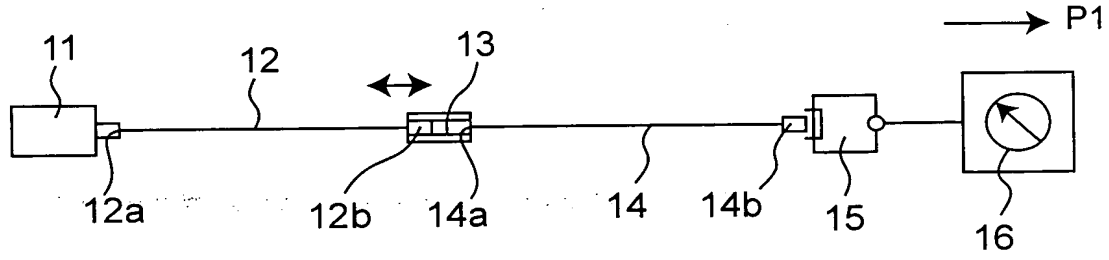
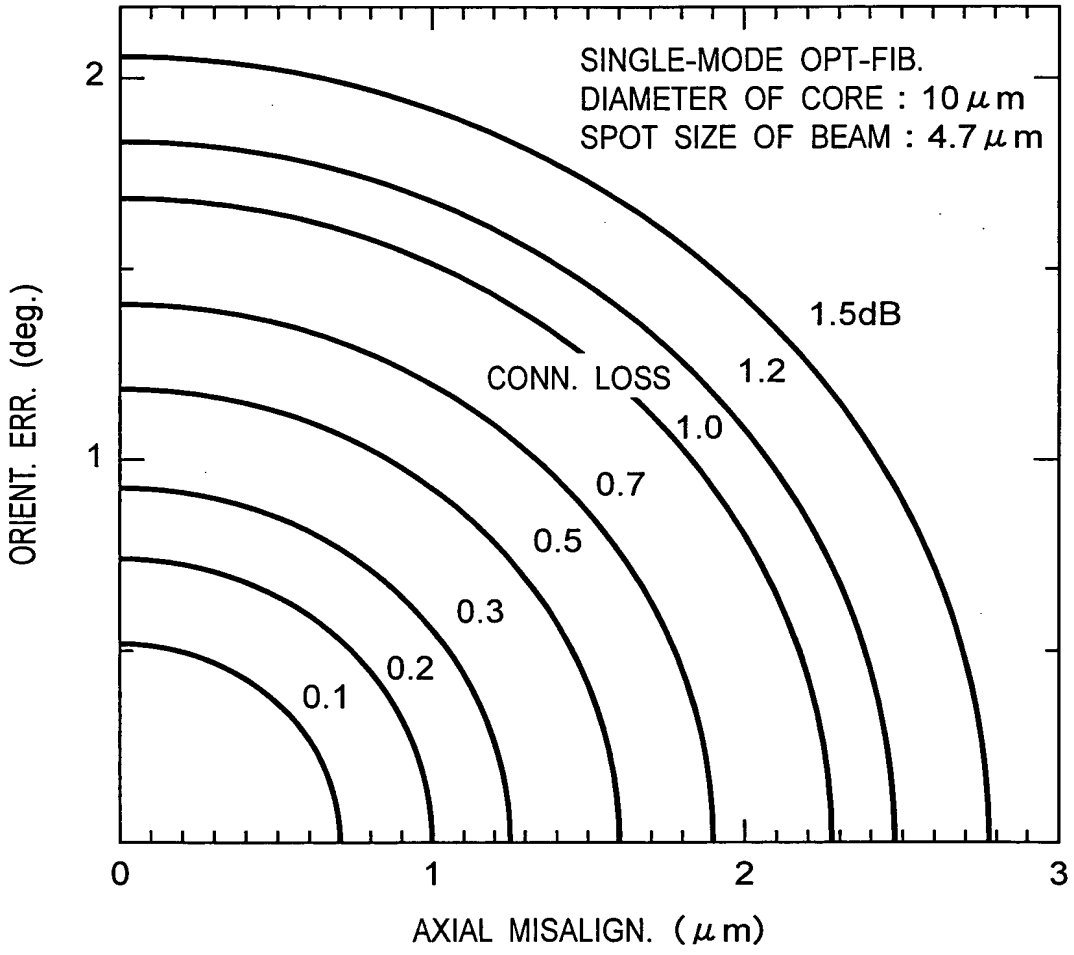


Fig.21


SINGLE-MODE OPT-FIB.
DIAMETER OF CORE : 10 μm
SPOT SIZE OF BEAM : 4.7 μm
CONN. LOSS
1.5dB
1.2
1.0
0.7
0.5
0.3
0.2
0.1
ORIENT. ERR. (deg.)
AXIAL MISALIGN. (μm)
0
1
2
3
1
2